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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427

ORDER NO. 97-18

CLOSURE WASTE DISCHARGE REQUIREMENTS FOR NEW CUYAMA CLASS III LANDFILL SANTA BARBARA COUNTY DEPARTMENT OF PUBLIC WORKS

The California Regional Water Quality Control Board, Central Coast Region (hereafter Board), finds that:

1. The County of Santa Barbara (hereafter "Discharger") owns and operates the New Cuyama Class III Landfill (hereafter "Landfill").

2. The five acre Landfill is located approximately three miles south of the town of New Cuyama, and is accessible by Perkins Road. The Landfill is located in the northeast quarter of Section 1, Township 9, North, Range 27 (APN No. 147-180-23) west of the San Bernardino Baseline and Meridian. (See **Attachment A** which is included as part of this Order.)

3. This Waste Discharge Requirements Order (Order) incorporates criteria applicable to solid waste disposal sites, particularly:

   a. criteria established in California Code of Regulations, Title 23, Division 3, Chapter 15 (Chapter 15), including Article 5, pertaining to landfill water quality monitoring and response programs as amended July 1, 1991; and

   b. criteria established in 40 CFR Parts 257 and 258 Solid Waste Facility Disposal Criteria, Final Rule (Known as "Subtitle D"), as promulgated October 9, 1991.

4. Due to revisions of Article 5 of Chapter 15, the Discharger submitted the June 1992 "Water Quality Program and Financial Assurance Cost Estimate, New Cuyama Landfill" (hereafter Article 5 Report) prepared by EMCON Southwest to update waste discharge requirements for the Landfill including a monitoring and reporting program. The Article 5 Report includes proposals for an improved ground water detection monitoring program, surface and vadose zone monitoring programs, and establishment of a financial assurance instrument to cover all expenses related to future corrective action costs.

5. This Order replaces Order No. 95-19, as adopted on March 10, 1995. Order No. 95-19 regulated all waste discharges to the Landfill. Additionally, this Order is intended to cover all items of Waste Discharge Requirements Order No. 93-84 adopted by the Board on October 8, 1993. Implementation of applicable revised Article 5 monitoring requirements and various other pertinent changes, including compliance with other State and Federal landfill regulations, will bring the Landfill into compliance with current requirements.

Physical Description: Geology

6. Land use within 1000 feet of the Landfill is predominately agricultural grazing land, open space, and oil production. The Los Padres National Forest Branch Canyon Campground is located one-half mile to the southeast.

7. The Landfill is located within the Cuyama River Basin. The Landfill is on the south side of the Basin within the Branch Canyon drainage area. The Landfill elevation is approximately 2,620 feet above mean sea level (MSL) and gently slopes northeast at 4% pre-landfill grade. The final grade of the Landfill will be at least 3% to allow surface drainage with the side slopes graded to between 5 to 1 and 8 to 1 based on the final volume of waste hauled to the New Cuyama Landfill from the clean closure of the Ventucopa Landfill.

8. The Discharger's data demonstrate natural geologic materials between the base of the Landfill and ground water cannot ensure that degradation of beneficial uses of ground water beneath or adjacent to the Landfill will not occur.

9. The earth materials encountered during subsurface exploration included recent to Quaternary-age alluvium consisting of unconsolidated to moderately indurated, yellowish-brown to white, medium dense to very dense, silty sand (SM), sand (SP, SW), and clayey sand/sandy clay (SC, CL). The earth materials were typically interbedded, alternating density and induration (i.e., rock-like) with increasing depth and some interbeds exhibiting calcium carbonate cementation. Older Quaternary-age alluvium (Qoa) deposits, and Miocene- to Pleistocene-age sedimentary deposits underlie the recent unconsolidated alluvium at depth. Hydraulic conductivities for the unsaturated alluvium varied in the granular soils from $1x10^{-2}$ cm/sec to $1x\ 10^{-3}$ cm/sec. Fine grained soils, such as clays and silts, may have values as low as $1x10^{-6}$ cm/sec.

10. The existing vadose zone monitoring system includes one lysimeter, LY-1. However, LY-1 is located at 52 feet below ground surface which is about 25 feet below the top of the saturated zone. The lysimeter has not been reliable for vadose zone monitoring because of its submergence in groundwater. The Discharger submitted the June 1995 "Report of Monitoring Feasibility," which recommends that additional lysimeters not be installed due to the problems with the current lysimeter. The California Integrated Waste Management Board has exempted the Landfill from landfill gas monitoring.

11. Major earthquake faults in the vicinity of the Landfill include the Ozena and South Cuyama faults, identified as major Quaternary-age faults and are potentially active.

Water Resources

12. The Landfill is located within the Branch Canyon drainage area. Annual precipitation is approximately eight inches which occurs primarily between November and April. Surface water flows (sheet flow) into natural drainage paths leading to the Cuyama River located to the north of the Landfill. The Cuyama River flows westward to the Twitchell Reservoir east of Santa Maria, California. The landfill is not located in an area subject to flooding.

13. Shallow ground water under the Landfill is reportedly unconfined at a depth of about 30 feet below ground surface. At about 90 feet below ground surface, a confined aquifer is believed to exist. Ground water flows in a northeast direction with a gradient of approximately 195 feet per mile (0.037 foot per foot). Using a hydraulic conductivity of 1 x 10^{-3} cm/sec, a porosity of 0.25, and the observed gradient of 0.037 ft/ft the velocity is estimated at 0.42 feet per day, or about 153 feet per year. This velocity is estimated as the upper value for the sandy deposits of the upper most permanent zone of saturation.

14. The nearest ground water users are located 2 miles northwest of the Landfill (ARCO Corporation) and 3-1/2 miles northeast of the Landfill (the Community of New Cuyama). Major irrigated agriculture does not occur within four miles of the Landfill.

15. Three monitoring wells have been installed to monitor the Landfill. The wells MW-1 and MW-3 are not included in the "detection monitoring" program because the tops of their screened intervals are approximately 30 to 50 feet deeper than the estimated top of the saturated zone. The Discharger will continue to monitor wells MW-1 and MW-3 until the four proposed wells are installed. The Discharger has proposed installing four additional monitoring wells after the Landfill is closed as referenced in a June 1995 "Report of Monitoring Feasibility." Wells MW-5, MW-6, MW-7, and MW-8 are proposed to monitor several sand and silty sand intervals at depths of 35 to 55 feet in the uppermost zone of saturation. Well MW-5 will be located downgradient of the central portion of the active disposal area. Well MW-6 will monitor downgradient of the east portion of the active disposal area and the west side of the completed disposal area. Well MW-7 will monitor downgradient of the east portion of the completed disposal area. Well MW-8 will monitor between the two disposal areas along the northeastern edge of the active disposal area. Well MW-2 is located cross gradient with respect to the active disposal area and is considered a background well. Well MW-4 is proposed upgradient of the active disposal area to supplement evaluation of background water quality.

Beneficial Uses

16. The Water Quality Control Plan, Central Coast Basin (Basin Plan), was revised and adopted on September 8, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State Waters. This Order implements the water quality objectives stated in the Basin Plan.

17. Present and anticipated beneficial uses of surface waters in the vicinity and down gradient of the discharge include:

    a. Domestic and municipal supply;
    b. Agricultural supply;
    c. Industrial supply;
    d. Non-contact water recreation;
    e. Water contact recreation;
    f. Wildlife habitat; and
    g. Warm fresh water habitat.

18. Present and anticipated beneficial uses of ground water in the vicinity of the discharge include:

    a. Municipal and domestic supply;
    b. Agricultural supply; and
    c. Industrial supply.

Landfill Specifics

19. The Discharger operates the facility under Solid Waste Facility Permit 42-AA-010 issued by the California Integrated Waste Management Board. The Landfill historically served the communities of New Cuyama, Cuyama, and the surrounding rural areas of the Cuyama Valley. The Landfill stopped receiving waste from the public on July 23, 1995. The Landfill will temporarily reopen to accept waste from the Ventucopa Landfill during the Summer and Fall of 1997 or 1998. The Landfill will cease accepting waste by November 1, 1998.

20. The Landfill consists of two disposal areas; an easterly 2.27-acre parcel and a westerly five acre parcel. The 2.27 acre parcel has been inactive since 1981. The five acre parcel was used for disposal until July 23, 1995. The Landfill utilized the trench and fill method of waste disposal. Prior to July 23, 1995, the Landfill received approximately seventeen tons per week of solid waste. A trench is normally twenty feet wide and twenty-two feet deep. The landfill trenches do not have liners or leachate collection systems. The waste is placed directly onto native soil and was covered twice a week with six inches to one foot of soil cover. After completion of a trench, a three foot layer of interim cover or foundation material is placed and a new trench is excavated. A strip of native soil approximately five feet in width is placed between adjacent trenches. The volume of waste placed to date is approximately 58,000 cubic yards. During the clean closure of the Ventucopa Landfill, an estimated 50,000 cubic yards of waste will be placed at the Landfill.

21. The Landfill is preparing for final closure. The Landfill is not expected to reach final capacity before its final closure date of November 1, 1998.

22. The Discharger is currently developing a final closure plan. The Discharger intends to use an engineered alternative final closure cover. The cover is referred to as a "mono-layer" and consists of three feet of native material compacted to approximately 80-85% of maximum density. The mono-layer is designed to store all precipitation which does not run off. Evapotranspiration will later remove the stored moisture preventing infiltration of moisture to underlying waste. The Discharger has utilized the HELP model to demonstrate the mono-cover will perform substantially better than the prescriptive design. The mono-layer design has been used at other landfills located in arid climates.

23. The Landfill meets the criteria of the California Code of Regulations as stated in Chapter 15 for classification as a Class III landfill suitable to receive non-hazardous solid wastes. This Order implements the prescriptive standards and performance goals of Chapter 15, as adopted by the State Water Resources Control Board on October 18, 1984, and as amended on July 1, 1991.

24. Wastes containing greater than one percent (>1%) friable asbestos are classified as hazardous under California Code of Regulations, Title 22. Since such wastes do not pose a threat to water quality, Section 25143.7 of the Health and Safety Code permits its disposal in permitted landfills, providing waste discharge requirements specifically allow the discharge and the wastes are handled and disposed in accordance with other applicable State and Federal statutes and regulations.

Statements of Regulation

25. On October 9, 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations pertaining to solid waste disposal facilities known as 40 CFR, Parts 257 and 258 Solid Waste Disposal Facility Criteria, Final Rule (also known as Subtitle D). Subtitle D regulations establish minimum criteria for location, design, operation, clean-up, and closure, of municipal solid waste landfills. California has received USEPA authorization (became an "Approved" State) to implement the Federal Subtitle D regulations. Subtitle D applicability is as follows:

    a. municipal solid waste landfill units that stopped receiving waste before October 9, 1991 are exempt from Subtitle D;

    b. municipal solid waste landfill units that received waste on or after October 9, 1991, but stopped receiving waste before October 9, 1993 must meet only the final cover requirements specified in Section 258.60(a); and

    c. municipal solid waste landfill units that received waste on or after October 9, 1993 must comply with all requirements of Subtitle D.

    For small landfills, including the New Cuyama Landfill, which: 1) accept less than 20 tons per day, 2) have no practical alternative for refuse disposal, 3) receive less than 25 inches of rain per year, and 4) have no existing ground water contamination, Subtitle D became effective and self-implementing on October 9, 1995.

26. Discharge of waste is a privilege, not a right, and authorization to discharge waste is conditioned upon the discharge complying with provisions of Division 7 of the California Water Code and with any more stringent limitations necessary to implement the Basin Plan, to protect beneficial uses, and to prevent nuisance. Compliance with this Order should assure conditions are met and mitigate any potential changes in water quality due to the project.

27. This Order contains prohibitions, discharge specifications, water quality protection standards, and provisions intended to protect the environment by mitigating or avoiding impacts of the project on water quality. This Order is for an existing facility and therefore is exempt from provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Title 14, California Code of Regulations, Chapter 3, Section 15301.

    On October 24, 1996, the Santa Barbara County Planning and Development Department adopted a Mitigated Negative Declaration for the "clean closure" of the Ventucopa Landfill and the temporary re-opening during 1997 of the New Cuyama Landfill. Short-term project specific impacts include noise impacts and risk of upset (of an existing natural gas line at the Ventucopa Landfill). Mitigation measures were specified for these two impacts. No other long term or cumulative impacts were identified.

Board Dates

28. On **February 28, 1997**, the Board notified the Dischargers and interested agencies and persons of its intention to update the waste discharge requirements for the discharge and has provided them with a copy of the proposed Order and an opportunity to submit written views and comments.

29. After considering all comments pertaining to this discharge during a public hearing on **July 11, 1997**, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED pursuant to authority in Section 13263 of the California Water Code, the Santa Barbara County Public Works Department, its agents, successors, and assigns may discharge wastes at the New Cuyama Class III Landfill, providing compliance is maintained with the following:

(Throughout this Order, footnotes are listed to indicate the source of requirements specified. Footnotes are as follows:

a=California Code of Regulations, Title 23, Chapter 15
b=Basin Plan
c=California Federal Regulations, Part 257 and 258 (Subtitle D)
d=California Water Code

Requirements without footnotes are based on professional judgment.)

A. DISCHARGE PROHIBITIONS

General Prohibitions

1. Discharge of waste to areas outside the "Designated Disposal Area", as specified in the June 30, 1992 Water Quality Program Financial Assurance Cost Estimate and identified in **Attachment B**, is prohibited.[d]

   Discharge of wastes within the "Designated Disposal Area", where refuse placement has not occurred as of March 10, 1995 is prohibited.[d]

2. Discharge of "hazardous" waste, except for waste that is hazardous due only to its asbestos content, is prohibited. For the purposes of this Order, the term "hazardous" waste is as defined in CCR, Title 23, Chapter 15 (Chapter 15), section 2521.[a]

3. Discharge of "designated" waste is prohibited, except when the Discharger demonstrates to the Executive Officer's satisfaction that waste constituents present a lower risk of water quality degradation than indicated by this classification. For the purpose of this Order, the term "designated" waste is as defined in Chapter 15, section 2522.[a]

4. Discharge of "liquid wastes" or "semi-solid wastes" (i.e., wastes containing less than 50 percent solids by weight) is prohibited.[a]

5. Discharge of de-watered sewage or water treatment sludge, which contains less than 50% solids by weight is prohibited except as specified in **Discharge Specification B.7.**[a]

6. Discharge of solid or liquid waste containing free liquid or moisture in excess of the waste's moisture holding capacity is prohibited. Waste must pass the paint filter test to determine if free liquids are present.[a,c]

7. Discharge of waste to ponded water from any source is prohibited.[a]

8. Ponding of liquids over solid wastes is prohibited.[a]

9. Discharge of wastes within five (5) feet of the highest anticipated water table elevation, including the capillary fringe, is prohibited.[a]

10. Discharge of waste within 15 feet of the property line, 100 feet of surface waters, or 100 feet of domestic water supply wells is prohibited.

11. Discharge of solid or liquid waste or leachate to surface waters, drainageway(s), or groundwater, is prohibited.[d]

12. Discharge of wastes that would reduce or impair the integrity of containment structures is prohibited.[a]

13. Discharge of wastes which, if commingled with other wastes in the Landfill, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which in turn:

    a. require a higher level of containment than provided by the Landfill;

    b. are restricted hazardous wastes; or

    c. impair the integrity of containment structures;

    is prohibited.[a]

14. Discharge of waste solvents, dry cleaning fluids, paint sludge, pesticides, phenols, brine, and acid and alkaline solutions is prohibited.[a]

15. Discharge of oils or other liquid petroleum products is prohibited.

16. Discharge of chemical and biological warfare agents is prohibited.

17. Discharge of solid waste after **November 1, 1998** is prohibited.

B. DISCHARGE SPECIFICATIONS

General Specifications

1. The Discharger shall implement the attached **Monitoring and Reporting Program (MRP) No. 97-18** to detect, at the earliest opportunity, any unauthorized discharge of waste constituents from the Landfill, or any unreasonable impairment of beneficial uses associated with (caused by) discharges of waste to the Landfill.[a]

2. Discharge of waste shall not cause the concentration of any Constituent of Concern or Monitoring Parameter to exceed its Concentration Limit in any monitored medium (i.e., soil-pore gas, soil-pore liquid, soil, or other geologic material), at any Monitoring Point assigned to Detection Monitoring pursuant to the current version of the **MRP**.[a]

3. Discharge of waste shall not cause the release of pollutants/contaminants or waste constituents in a manner which could cause a condition of pollution or nuisance to occur, as indicated by the most appropriate statistical or non-statistical data analysis method and retest method listed in the **MRP, Part III**.[a,d]

4. Discharge of waste shall neither cause nor contribute to pollution of State waters via the release of waste constituents in either liquid or gaseous phase.

5. Discharge of waste shall neither cause nor contribute to any surface water pollution or nuisance including but not limited to:

    a. floating, suspended, or deposited macroscopic particulate matter or foam;

    b. increases in bottom deposits or aquatic growth;

    c. an adverse change in temperature, turbidity, or apparent color beyond natural background levels;

    d. the creation or contribution of visible, floating, suspended, or deposited oil or other products of petroleum origin; and

    e. the introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of State waters' beneficial uses.

6. Discharge of waste shall not be a source of nuisance(s). Nuisance includes but is not limited to odors, litter, wind blown trash, and noise.

7. Discharge of de-watered sewage sludge or water treatment sludge to Landfill is prohibited, except when utilized beneficially as soil amendment to promote vegetation over intermediate or final cover and when allowed with written Executive Officer approval.

8. With written Executive Officer approval, water (including non-hazardous and non-designated leachate and gas condensate) may be utilized over Landfill areas, including unlined Landfill areas, during disposal site operations. The use of such liquids shall be limited to the amount necessary for dust control, construction (soil compaction), and vegetation establishment/irrigation purposes. The Discharger shall minimize the infiltration of rain-water and prevent infiltration of leachate or gas condensate into areas containing refuse.

9. The Discharger shall prevent formation of a habitat for carriers of pathogenic microorganisms.

10. The handling and disposal of asbestos containing wastes shall be in accordance with all applicable Federal, State, and Local statutes and regulations.

11. Ash wastes may be discharged to Landfill unit(s) only when chemical analyses demonstrate to the Executive Officer's satisfaction that the waste is non-hazardous.[a]

12. Refuse shall be covered semi-weekly by at least six inches of cover material, or if allowed by the Local Enforcement Agency, meet Performance Standards of the California Code of Regulations, Title 14, Section 17683. Cover shall promote lateral runoff of rainfall away from the active disposal area. Upon the Executive Officer's written approval, alternative daily cover materials may be utilized.

13. All refuse material that is wind-blown outside the active disposal area shall be collected regularly and disposed in the Landfill.

14. Waste shall not be discharged to a wetland, as defined in 40 CFR Section 232.2(r).[c]

15. The Discharger shall obtain and maintain assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the Landfill until the end of the Landfill's Post-Closure Maintenance Period and during any compliance period.[a]

16. Wastes discharged in violation of this Order shall be removed and relocated.

17. The Discharger shall operate the Landfill and configure the final Landfill contours, in conformance with the most recently Executive Officer approved Closure Plan, except where the Plan(s) conflict with this Order. In the event of conflict, this Order shall govern in cases where it is most restrictive. Any changes to the Plan(s) that may affect compliance with this Order must be approved in writing by the Executive Officer.[a,d]

<u>Wet Weather</u>

18. By **October 1** of each year, all necessary runoff diversion and erosion prevention measures shall be implemented. All necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or Landfill flooding and to prevent surface drainage from contacting or percolating through wastes.[a]

19. All Landfill surfaces and working faces shall be graded and operated to minimize rainfall infiltration into wastes, to prevent ponding of water, and to resist erosion. Positive drainage to divert rainfall runoff from areas containing waste shall be provided.

20. Water collected in any storm water catchment basin or an on-site water treatment facility may be used in minimum amounts necessary for dust-control, compaction, or irrigation of cover vegetation provided none of the water infiltrates past the evapotranspiration zone.

21. Waste containment barriers shall be maintained to ensure their effectiveness.[a]

Design Criteria

22. Landfill units, containment structures, and drainage facilities shall be designed and constructed under the direct supervision of a California registered civil engineer or a certified engineering geologist, and shall be certified by that individual as meeting the prescriptive standards and performance goals of all State and Federal landfill regulations including, but not limited to, Chapter 15 and 40 CFR Parts 257 and 258, prior to waste discharge. Drainage ditches crossing over Landfill areas containing wastes shall be lined with material which provides an effective field permeability of 1.0×10^{-6} cm/sec or less. The drainage facilities shall be designed and constructed to accommodate anticipated precipitation and peak surface runoff flows from a 100-year, 24-hour event.[a,c]

23. Landfill facilities shall be designed and constructed to ensure integrity under both static and dynamic conditions considering seismic acceleration and to minimize damage during the "maximum probable earthquake" to the graded foundation and to structures which control leachate, surface drainage, erosion, and gas. The slope of those portions of the fill which will be the final exterior surface shall be developed in accordance with all applicable State and Federal requirements, including Chapter 15, Subsection 2581

24. All Landfill units, containment structures, and drainage facilities shall be designed, constructed and maintained to limit to the greatest extent possible ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and damage due to natural disasters (e.g., floods with a predicted frequency of once in 100 years, the maximum probable earthquake, and severe wind storms).[a]

Closure

25. All portions of the Landfill containing waste on **November 1, 1998** shall be covered with a final cover pursuant to Chapter 15 and Subtitle D final cover requirements, except as provided by Discharge Specification No. B.26., including from bottom to top:[a]

    a. at least a two foot foundation layer placed over waste;

    b. A low permeability geomembrane or a one-foot minimum thickness compacted clay layer with an in-place permeability no faster than $1x10^{-6}$ cm/sec, or no faster than the permeability of underlying natural geologic materials, which ever is less, and

    c. at least one foot of soil capable of supporting vegetation, resisting erosion, and protecting the underlying low permeability layer.

    The final cover shall be graded to a slope of at least 3%, but not more than 10% unless adequate erosion control measures are implemented and approved by the Executive Officer.

26. Alternative final cover designs may be considered for Executive Officer approval, if such designs provide equivalent reduction in infiltration and protection from wind and water erosion.[a]

27. Permeability determinations shall be as specified in Article 4 of Chapter 15. Permeabilities specified for cover shall be relative to water. Permeabilities shall be determined primarily by appropriate field test methods in accordance with civil engineering practice (sealed double ring infiltrometer test is required. Appropriate compaction tests may be used in conjunction with laboratory permeability tests to determine field permeabilities as long as a reasonable number of field permeability tests are also conducted. Construction methods and quality assurance procedures shall be submitted for Board review, and shall insure all parts of the low-permeability layer meet the hydraulic conductivity and compaction requirements.[a]

28. Final Closure activities shall be initiated by the Discharger **by November 1, 1998,** and completed by **May 1, 1999,** in accordance with the most recently approved closure plan.[a]

29. All closed Landfill unit(s) shall be provided with at least two permanent monuments installed by a licensed land surveyor from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period. Cumulative waste subsidence and settlement of areas where final cover is installed shall be documented and reported annually.[a]

30. Landfill gases shall be adequately vented, removed from the Landfill, or otherwise controlled as required to prevent the danger of explosion, adverse health effects, nuisance conditions, or the impairment of State waters' beneficial uses due to migration through the vadose (unsaturated) zone.[a]

Reporting

31. Discharger shall notify Board staff within 24 hours by telephone and within seven days in writing of any noncompliance potential or actual endangerment to health or the environment. Any noncompliance which threatens the Landfill's containment integrity shall be promptly corrected.

    Correction schedules are subject to the approval of the Executive Officer except when delays will threaten the environment and/or the Landfill's integrity (i.e., emergency corrective measures). Corrections initiated prior to Executive Officer approval shall be so stated in the written report. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times or anticipated duration; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. This provision includes but is not limited to:

    a. violation of a discharge prohibition;

    b. violation of any treatment system's discharge limitation;

    c. slope failure; and

    d. leachate seep occurring on or in proximity to the Landfill.[a]

32. Reports of compliance, noncompliance, or progress reports on interim and final requirements contained in compliance schedule shall be submitted within 14 days following each scheduled date unless otherwise specified within the Order. If reporting noncompliance, the report shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. A second report shall be submitted within 14 days of achieving full compliance.

33. Reports shall be submitted in advance of any planned changes in the permitted facility or in an activity which could potentially or actually result in noncompliance.

34. Additional reporting requirements are contained in the attached Monitoring and Reporting Program No. 97-18, MRP.

C. WATER QUALITY PROTECTION STANDARDS

1. Water Quality Protection Standard (Standard). The five parts of the Standard are as follows:

   a. Constituents of Concern. The list of Constituents of Concern for water-bearing media [i.e., ground water, surface water, and soil pore liquid]; and soil pore gas, include those described in the attached **MRP, Parts I.E.5.**

   b. Concentration Limits. For each Monitoring Point assigned to the Detection Monitoring Program, MRP **Part I.E.1.**, the Concentration Limit for each Constituent of Concern [or Monitoring Parameter] shall be its background value as obtained during that Reporting Period defined in MRP Part V, as described in **MRP, Part II.C.**

   c. Monitoring Points for Detection Monitoring shall be those listed in **MRP Part I.E.1** and shown on **Attachment B.**

   d. Point of Compliance. Point of Compliance means a vertical surface located at the hydraulically downgradient limit of Landfill unit(s) that extends through the uppermost aquifer underlying the unit.

   e. Compliance Period. The Compliance Period is the number of years equal to the active life of the Landfill unit(s) (including any Landfill unit activity prior to the adoption of the waste discharge requirements) plus the closure period. The Compliance Period is the minimum period of time during which the Discharger shall conduct a water quality monitoring program subsequent to a release. The estimated duration of the Landfill's Compliance Period is **26 years.** Each time the Standard is broken (i.e., a release is discovered), the Landfill begins a Compliance Period on the date the Board directs the Discharger to begin an Evaluation Monitoring Program. If the Discharger's Corrective Action Program (CAP) has not achieved compliance with the Standard by the scheduled end of the Compliance Period, the Compliance Period is automatically extended until the Landfill has been in continuous compliance for at least three consecutive years.

2. Monitoring Parameters for Detection Monitoring: The Detection Monitoring Parameters are listed in MRP **Part I.E.3.**

3. Additional Monitoring Points or Background Monitoring Points. By **May 1, 1999,** the Discharger shall, install any additional ground water, soil pore liquid, soil pore gas, or leachate monitoring devices required to fulfill the terms of this Order.

4. Additional Requirements

a. The concentrations of indicator parameters or waste constituents in water passing through the "Detection" Points of Compliance shall not exceed the "Concentration Limits" established pursuant to **MRP No. 97-18**.

b. Discharge of waste shall not cause a "statistically significant" increase over the Concentration Limits of any of the constituents of concern or monitoring parameters listed in **Appendix I and II of Subtitle D**.

c. Discharge of waste shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board.

d. Discharge of waste shall not cause concentrations of chemicals and radionuclides in underlying and downgradient ground water to exceed limits set forth in Title 22, Chapter 15, Articles 4 and 5 of the code.

e. Discharge of waste shall not adversely impact the quality of water in any aquifer.

f. Discharge of waste shall not cause ground water in downgradient wells tc exceed the State Department of Health Services latest recommended Drinking Water Action Levels or Maximum Contaminant Levels.

D. PROVISIONS

General Provisions

1. Board Order No. 95-19, "Closure Waste Discharge Requirements for the New Cuyama Landfill" adopted by the Board on March 10, 1995, is hereby rescinded.

2. The Discharger shall comply with "Monitoring and Reporting Program No. 97-18", as specified by the Executive Officer.

3. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to regulatory agency personnel and to facility operating personnel who shall be familiar with its contents.

4. The Discharger shall comply with all other applicable provisions of Chapter 15, Subtitle D, and other State and Federal landfill regulations that are not specifically referred to in this Order. If any applicable regulatory requirements overlap or conflict in any manner, the most restrictive requirement shall govern in all cases unless specifically stated otherwise in this Order or as directed by the Executive Officer.

5. The Discharger shall maintain legible records of the volume and type of each waste discharged at each Landfill unit and the manner and location of discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Board and of the State Water Resources Control Board at any time during normal business hours. At the beginning of the post-closure maintenance period, copies of these records shall be sent to the Board.[a]

6. The Discharger shall report all changes in usage of semi-weekly cover and performance standards within ten days following the change.

7. The Discharger shall be responsible for accurate waste characterization including determinations of whether or not wastes will be compatible with containment features or other wastes and whether or not wastes are required to be managed as hazardous wastes.[a]

8. The Discharger shall have a continuing responsibility to assure protection of usable waters from discharged wastes and from gases and leachate generated by discharged waste during the Landfills active life, closure, and post-closure maintenance periods and during subsequent use of the property for other purposes.

9. The Board considers the Discharger to have a continuing responsibility for correcting any problems which may arise in the future as a result of this waste discharge.

10. At any time the Discharger may file a written request (including appropriate supporting documents) with the Executive Officer proposing appropriate modifications to the MRP. The request may address changes to:

    (a) any statistical method, non-statistical method, or retest method used with a given constituent or parameter,

    (b) the manner of determining the background value for a constituent or parameter,

    (c) the method for displaying annual data plots,

    (d) the laboratory analytical method used to test for a given constituent or parameter,

    (e) the media being monitored [e.g., the addition of soil pore gas to the media being monitored],

    (f) the number or placement of Monitoring Points for a given monitored medium, or

    (g) any aspect of monitoring or QA/QC.

    After receiving and analyzing such a report, the Executive Officer may reject the proposal for reasons listed or incorporate it along with any necessary changes into the attached MRP. The Discharger shall implement changes proposed by the Executive Officer upon receipt of a revised MRP.

11. If the Discharger or the Board determines, pursuant to Section 2550.8(g) or (i), that there is evidence of a release or a new release from any portion of the Landfill, the Discharger shall immediately implement the procedures outlined in **MRP, Part IV.C.**[a]

12. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this **Order** or with **MRP No. 97-18**, as required by Sections 13750 through 13755 of the California Water Code.[d]

13. All reports shall be signed as follows:

    a. for a corporation; by a principal executive officer of at least the level of vice president*;

    b. for a partnership or sole proprietorship; by a general partner or the proprietor, respectively*;

    c. for a public agency; by either a principal executive officer or ranking elected official*; or,

    d. engineering reports; by a California Registered Civil Engineer or Certified Engineering Geologist.

    * or their "duly authorized representative."

14. Any person signing a report makes the following certification whether its expressed or implied:

> "I certify under penalty of perjury I have personally examined and am familiar with the information submitted in this document and all attachments and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

15. Except for data determined to be confidential under Section 13267(b) of the California Water Code, all reports prepared in accordance with this Order shall be available for public inspection at the Board office.[d]

16. The Discharger shall notify the Board in writing of any proposed change in ownership or responsibility for construction or operation of the facility. This notification shall be given at least 90 days prior to the effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with this Order. In the event of any change in ownership of this Landfill, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Board. Notification to the Board shall also comply with Section 2590(c) of Chapter 15.[a]

17. To assume operation pursuant to this Order, the succeeding owner or operator shall apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Board, and a statement indicating that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a violation of Section 13264 of the Water Code (discharge without waste discharge requirements). Transfer may be approved or disapproved in writing by the Executive Officer.[d]

18. The Discharger shall submit a **'Wet Weather Preparedness Report'** by **November 1 of each year.** The report must address in detail compliance with all wet weather preparedness related specifications (e.g., **Discharge Specifications B.18. through B.24.**) of this Order, and all other relevant Chapter 15 and Subtitle D criteria.

19. The Discharger shall submit a **"Closure Completion Report"** by **August 1, 1999.** The Report shall include a detailed description of all closure activities, as built drawings of the landfill cap, drainageways and other relevant features, long term site maintenance plan, long term monitoring plan and a summary of how the requirements of this Order have been or will be met.

20. Within 60 days after completing final closure of all Landfill units,

    a. the owner or operator must record a notation on the deed to the Landfill facility property or some other instrument that is normally examined during title search, and notify the Executive Officer that the notation has been recorded and a copy has been placed in the operating record.

    b. the notation on the deed must in perpetuity notify any potential purchaser of the property that:

        i. the land has been used as a landfill facility;

        ii. its use is restricted pursuant to Subtitle D, Section 258.61(c)(3); and

        iii. should the Discharger default in post-closure care, liability shifts to the new owner/operator.[a,c]

21. The Discharger shall maintain waste containment facilities and precipitation and drainage controls, and shall continue to monitor as appropriate ground water, the vadose zone, and surface waters per the current version of the MRP throughout the post-closure maintenance period.[a]

22. The post-closure maintenance period shall continue until the Board determines that remaining wastes in the Landfill will not threaten water quality.[a]

23. Discharger shall notify the Board within 24 hours by telephone and within seven days in writing of any flooding, equipment failure, slope failure, or other change in Landfill conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures.

24. Pursuant to the California Code of Regulations, Title 23, Chapter 15, Article 9, the Discharger must submit a technical report to the Executive Officer not later than **September 15, 1999** which:

    - discusses whether in their opinion there is any portion of the Order that is incorrect, obsolete, or otherwise in need of revision;
    - includes any other technical documents needed to demonstrate continued compliance with this Order and all pertinent State and Federal requirements.[a]

25. The Discharger shall obtain and maintain the following Financial Assurance Instrument (Instrument) until the end of the Post-Closure Maintenance Period. The Discharger intends to utilize an *Enterprize Fund* in general conformance with the guidelines contained in Title 14, CCR, Section 18285. The Discharger shall submit a report every five years that either validates the instruments ongoing viability or proposes and substantiates any needed changes (e.g., a documented increase in the monitoring systems' ability to provide reliable early detection of a release can cause a decrease in the Instrument's financial coverage). The next report is due by **November 1, 2000 and subsequent reports are due every five years thereafter.**[ab]

26. Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of section 13267 of the California Water Code, or falsifying any information provided therein is guilty of a misdemeanor.[d]

27. The Discharger and/or any person who violates this Order and/or who intentionally or negligently discharges waste, causes or permits waste to be deposited where it is discharged to waters of the state, may be liable for civil and/or criminal remedies as appropriate pursuant to the California Water Code.[c]

28. The Board will review and revise the requirements of this Order when necessary.

29. The following "Report and Implementation Date Summary" is intended as a quick reference of the dates in the Order.

TASK	IMPLEMENTATION DATE
Stop Accepting Waste [Prohibition A.17.]	**November 1, 1998**
Initiate Closure [Discharge Specification B.28.]	**November 1, 1998**
Complete Closure and Install Monitoring System [WQPS C.3.]	**May 1, 1999**
Closure Completion Report [D.19.]	**August 1, 1998**
Runoff Diversion & Erosion prevention [Discharge Specification B.18.]	**October 1 of each year**
Wet Weather Report [Specification D.18]	**November 1 of each year**
Technical Report [Provision D.24.]	**September 15, 1999**
Financial Assurance Rept. [Provision D.25.]	**November 1, 2000 and every 5 years thereafter**

I, ROGER W. BRIGGS. Executive Officer, do hearby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on July 11, 1997.

Executive Officer

7-23-97

Date

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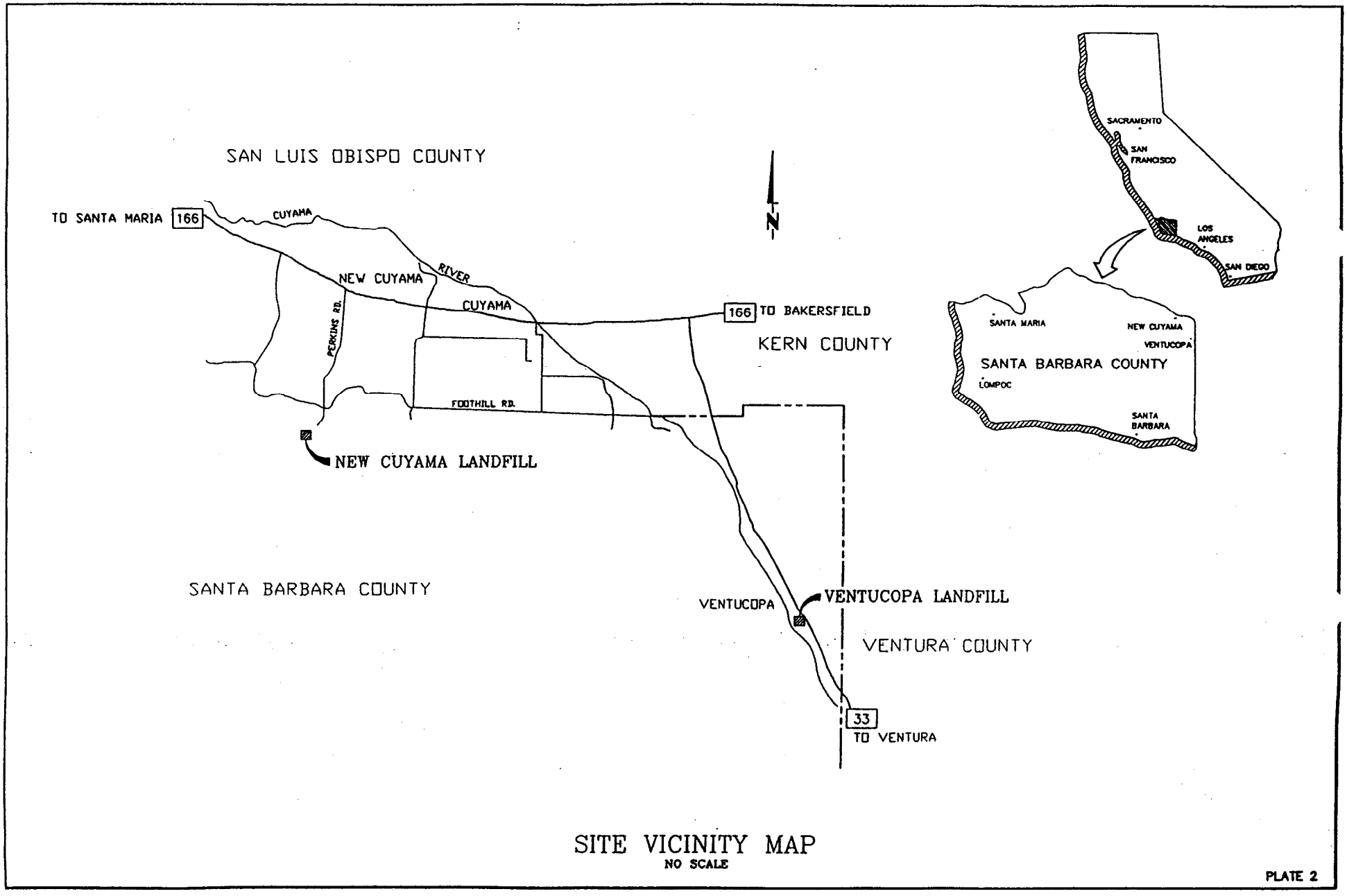
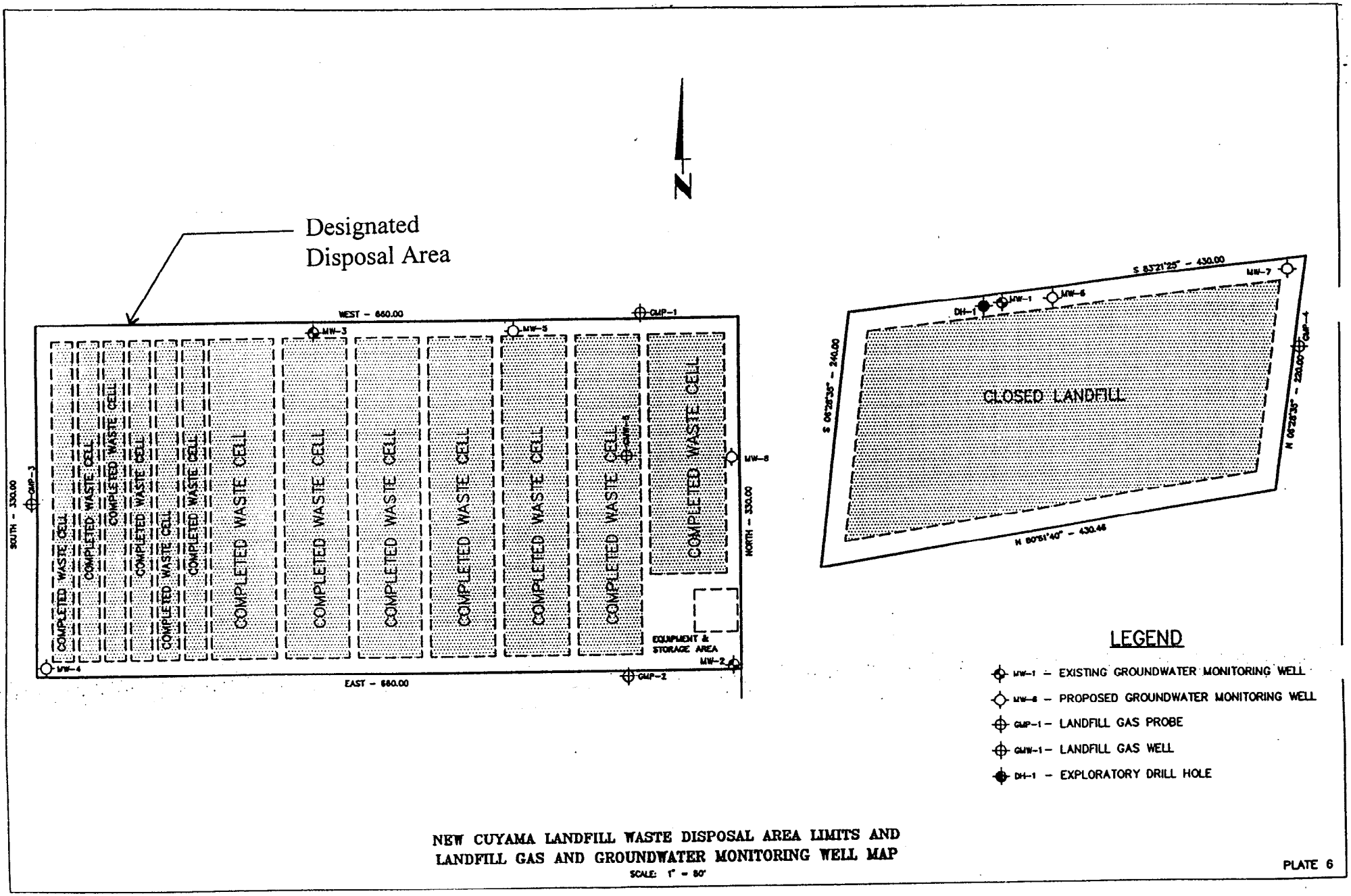


SITE VICINITY MAP

NO SCALE

PLATE 2

Attachment A



NEW CUYAMA LANDFILL WASTE DISPOSAL AREA LIMITS AND LANDFILL GAS AND GROUNDWATER MONITORING WELL MAP

SCALE: 1" = 80'

PLATE 6

Attachment B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427

MONITORING AND REPORTING PROGRAM NO. 97-18 FOR NEW CUYAMA CLASS III LANDFILL SANTA BARBARA COUNTY

(Note: References are bolded and refer to this Monitoring and Reporting Program (MRP) unless otherwise noted.)

PART I: MONITORING AND OBSERVATION SCHEDULE

Unless otherwise indicated, all required monitoring and observations shall be reported in the Detection Monitoring Report and/or the Annual Summary Report (**Part IV**)

A. **SITE INSPECTIONS** - The Discharger shall inspect the Landfill in accordance with the following schedule and record at a minimum the Standard Observations (**Part V**):

1. During the wet season (October through April) following each storm which produces storm water discharge with inspections performed at least quarterly.
2. During the dry season (May through September), a minimum of one inspection.

B. **INTAKE MONITORING** - The Discharger shall maintain a weekly record of the type and volume of waste received.

C. **DRAINAGE SYSTEMS INSPECTIONS** - The Discharger shall inspect all drainage control systems following each Significant Storm and record the following information:

1. whether storm drains contain liquids;
2. general conditions of landfill surface and drainage facilities; and
3. steps taken to correct any problems found during inspection and date(s) when taken.

D. **RAINFALL DATA** - The Discharger shall record the following information;

1. total precipitation during the Monitoring Period,
2. precipitation during the most intense twenty-four hour interval of the Monitoring Period, and
3. return rating of most intense 24 -hour storm [25 year, 100 year, and so on]

E. **MONITORING** - The Discharger shall monitor ground water, soil pore liquid, soil pore gas and surface water in accordance with the following schedule. Sampling, analyses, and reporting shall follow Parts II, III, and IV. The Discharger shall assure enough samples are taken at each monitoring point to qualify for the most appropriate statistical analysis method (Part III).

1. **Monitoring Points** - The Discharger shall sample the following Monitoring Points as shown on Attachment B to the associated Order:

   a. **for ground water**, the Monitoring Points shall be wells MW-2 and proposed wells MW-4, MW-5, MW-6, and MW-7. Wells MW-1 and MW-3 shall be used as Monitoring Points until the proposed wells are installed, and if appropriate in the future. Well MW-2 and proposed well MW-4 shall be background monitoring points. Proposed wells MW-5, MW-6, MW-7, and MW-8 shall serve as point of compliance wells.

b. **for surface water,** the Monitoring Points shall be where surface water flow enters and leaves the property boundary. Monitoring Points are not established due to the fact no well defined drainageways exist along the Landfill property line. Storm water runoff is only expected during or soon after heavy precipitation. The Landfill property boundary is shown on Attachment B.

c. **for the unsaturated zone**, the Monitoring Points shall include LY-1, if appropriate, and proposed shallow ground water monitoring wells.

2. **Monitoring Frequency** - All Monitoring Points must be sampled once each Monitoring Period (**Part V**), semi-annual for Monitoring Parameters and every five years for Constituents of Concern.

3. **Monitoring Parameters**

a. GROUND WATER & SOIL PORE LIQUID - The Discharger shall analyze all samples from all ground water and soil pore liquid Monitoring Points for the following Monitoring parameters:

chloride
total dissolved solids
sodium
sulfate
potassium
magnesium
volatile organic constituents**

** The VOC_{water} Monitoring Parameters includes all Volatile Organic Compounds (VOCs) detectable using USEPA Method 8260, including at least all 47 VOCs listed in Appendix I to 40 CFR, 258 (Subtitle D), and all unidentified peaks.

Statistical and non-statistical assessment methods, as required by Part III, shall be used to evaluate the sampling results.

b. **SURFACE WATER**: The Discharger shall analyze all samples from surface water Monitoring Points for the following Monitoring parameters:

chloride
pH
chemical oxygen demand
sulfate
manganese
sodium
total suspended solids
total organic carbon (or oil and grease)

c. **SOIL PORE GAS**: The Discharger shall analyze all samples from all soil pore gas Monitoring Points for the following parameters:

methane
carbon dioxide

4. **Ground Water Flow Rate and Direction** - For each monitored ground water aquifer, the Discharger shall measure the water level in each well at least **semi-annually** including the times of expected highest and lowest elevations of the water level. The Discharger shall determine the presence of vertical gradients, the ground water flow rate, and the flow direction for the respective ground water body.

5. **Constituents of Concern**

   a. **WATER BEARING MEDIA**: The Constituents of Concern for Water Bearing Media (i.e., ground water, soil pore liquid, and surface water) include carbonate and all constituents listed in **Appendix II of 40CFR, part 258.**

   b. **SOIL PORE GAS** - The Constituents of Concern for soil pore gas include methane, carbon dioxide, volatile organic constituents, and semi-volatile organic constituents.

   Monitoring for Constituents of Concern shall encompass only those constituents that do not serve as Monitoring Parameters.

6. **Thirty-Day Sample Procurement Limitation** - For any given monitored medium, the samples taken from all Monitoring Points to satisfy the data analysis requirements for a given Monitoring Period shall all be taken within a span not exceeding 30 days. Samples shall be taken in a manner that ensures sample independence to the greatest extent feasible [Section 2550.7(e)(12)(B) of Article 5].

PART II: SAMPLE COLLECTION AND ANALYSIS

A. **SAMPLING AND ANALYTICAL METHODS** - Sample collection, storage, and analysis shall be performed according to the most recent version of Standard USEPA Methods (USEPA publication "SW-846") and in accordance with an approved sampling and analysis plan. Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. Specific methods of analysis must be identified. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board. In addition, the Discharger is responsible for seeing that the laboratory analysis of all samples from Monitoring Points meets the following restrictions:

1. The methods of analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., Trace) in historical data for that medium, the analytical method having the lowest Method Detection Limit (MDL) shall be selected.

2. Trace results (results falling between the MDL and the Practical Quantitation Limit (PQL) shall be reported as such.

3. MDL and PQL shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits are defined in **Part IV** and shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab. If the laboratory suspects that due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived values, the results shall be flagged accordingly and an estimate of each limit actually achieved shall be included.

4. Quality assurance and quality control (QA/QC) data shall be reported along with the sample results to which it applies. Sample results shall be reported unadjusted for blank results or spike recovery. The QA/QC data submittal shall include:

   a. the method, equipment, and analytical detection limits;
   b. the recovery rates, an explanation for any recovery rate that is outside the USEPA-specified recovery rate;
   c. the results of equipment and method blanks;
   d. the results of spiked and surrogate samples;
   e. the frequency of quality control analysis; and
   f. the name and qualifications of the person(s) performing the analyses.

5. QA/QC analytic results involving detection of common laboratory contaminants (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate) shall be reported and flagged for easy reference by Board Staff.

6. Non-targeted chromatographic peaks shall be identified, quantified, and reported to a reasonable extent. When significant unknown peaks are encountered, second column or second method confirmation procedures shall be performed in an attempt to identify and more accurately quantify the unknown analyte(s).

B. **CONCENTRATION LIMITS** - The Concentration Limit for any given Constituent of Concern or Monitoring Parameter in a given monitored medium shall be either:

1. the constituent's background value, established using historical records and approved by the Executive Officer; or

2. the constituent's interval limits, established by the Discharger and approved by the Executive Officer; or

3. the constituent's MDL, in cases where the constituent's MDL is exceeded in less than 10% of the historical samples.

C. **BACKGROUND/INTERVAL DETERMINATION** - For the purpose of establishing Concentration Limits for each Constituent of Concern and each Monitoring Parameter detected in greater than ten percent of medium's samples the Discharger shall:

1. Analyze all existing historical monitoring data at the site and propose to the Executive Officer Concentration Limits for each Constituent of Concern and each Monitoring Parameter at each Monitoring Point for which sufficient data exists;

2. In all cases where sufficient data for determining Concentration Limits does not exist, the Discharger shall collect and analyze samples for all Constituent(s) of Concern and Monitoring Parameter(s) which required additional data. Once sufficient data is obtained the Discharger shall submit the proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years;

3. Sample and analyze new Monitoring Points, including any added by this Order, until sufficient data is available to establish a proposed Concentration Limit for all Constituents of Concern and Monitoring Parameters. Once sufficient data is obtained the Discharger shall submit the proposed Concentration Limit to the Executive Officer for approval. This procedure shall take no longer than two calendar years.

D. **RECORDS TO BE MAINTAINED** - Written records shall be maintained by the Discharger or laboratory and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and of the Monitoring Point from which it was taken, along with the identity of the individual who obtained the sample;

2. Date and time of sampling;

3. Date and time that analyses were started and completed, and the name of the personnel performing each analysis;

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used; and

5. Results of analyses, and the MDL and PQL for each analysis.

PART III: STATISTICAL AND NON-STATISTICAL ANALYSIS OF DATA

A. **STATISTICAL METHOD** - The Discharger shall use statistical methods to analyze Constituents of Concern and Monitoring Parameters which exhibit concentrations which equal or exceed their respective MDL in at least ten percent of the historical background samples. Except for pH, which uses a two-tailed approach, the statistical analysis for constituents and parameters shall be one-tailed (testing only for a statistically significant increase). The Discharger may propose and use other statistical methods that comply with the July 1, 1991 revision of Article 5 of Chapter 15 (refer to the Shewhart-CUSUM Control Chart Method described below).

Each of these statistical methods is more fully described in the USEPA Interim Final Guidance Document entitled Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities dated April 1989 which is hereby incorporated by reference.

Shewhart-CUSUM Control Chart Method - This method involves intrawell comparisons. Six to eight historical data points are required in order to reliably determine the mean and standard deviation for each constituent's concentration in a given well. (See Discharger's June 30, 1992 Water Quality Program and Financial Assurance Cost Estimate for a complete description of the Shewart-CUSUM method); or

B. **NON-STATISTICAL METHOD** - The Discharger shall use the following non-statistical method for analyzing constituents which are detected in less than ten percent of applicable background samples. This method involves a two-step process:

1. From all constituents to which the method applies, compile a list of those constituents which exceed their respective MDL in the downgradient sample of a given Monitoring Point and then;
2. Evaluate whether the listed constituents meet either of two possible triggering conditions. Either the list contains two or more constituents, or contains one constituent which equals or exceeds its PQL. If either condition is met, the Discharger shall conclude that a release is tentatively indicated and shall immediately implement the appropriate retest procedure under **Part III.D**.

For each Monitoring Point, the aforementioned list shall be compiled based on either the data from the single sample (for that constituent) taken during that Monitoring Period from that Monitoring Point, or in cases of multiple independent samples, from the sample which contains the largest number of constituents.

C. **DISCRETE RETEST** - In the event that the Discharger concludes that a release has been tentatively indicated, the Discharger shall carry out the reporting requirements of **Part IV.C.2.**, and within 30 days of this indication, collect two new suites of samples for the indicated Constituent(s) of Concern or Monitoring Parameter(s) at each indicating Monitoring Point, collecting at least as many samples per Monitoring Point as were used for the initial test. Resampling of the other monitoring points is optional. As soon as the retest data is available, the Discharger shall use the same statistical method (or non-statistical comparison) that provided the tentative indication of a release to separately analyze each of the two suites of retest data. If the test results of either (or both) of the retest data suites confirms the original indication, the Discharger shall conclude that a release has been discovered and shall carry out the requirements of **Part IV.C.4**. Retests shall be carried out only for the Monitoring Point(s) for which a release is tentatively indicated and only for the Constituent of Concern(s) or Monitoring Parameter(s) which triggered the indication except as follows:

VOC $_{composite}$ - Because the VOC $_{composite}$ Monitoring Parameters is a single parameter which addresses an entire family of constituents likely to be present in any landfill release, the scope of the laboratory analysis for each of the two retest samples shall be the entire VOC $_{composite}$. A confirming retest shall validate the original indication even if the detected constituent(s) in the retest sample(s) differs from those detected in the sample which initiated the retest.

PART IV: REPORTING

A. **GENERAL** - A written Detection Monitoring Report shall be submitted **semi-annually** in accordance with the Monitoring Period dates defined in **Part V.G.** The Discharger shall submit a report concerning the analysis of all Constituents of Concern each time the analysis is carried out in accordance with Part IV. All reports required under this section shall be submitted no later than thirty days following the end of their respective Monitoring Period. All reports shall be comprised, as appropriate, of at least the following:

1. **Letter of Transmittal** - A letter transmitting the essential points shall accompany each report. The letter shall include a discussion of any violations found since the last such submitted report and shall describe actions taken or planned for correcting those violations. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or above or by his/her duly authorized representative. The letter shall contain a statement by the official, under penalty of perjury that to the best of the signer's knowledge the report is true, complete, and correct.

2. **Compliance Evaluation Summary** - The summary shall contain at least:

   a. Discussion of compliance with concentration limits. Release indications and actions taken.

   b. For each monitored ground water body, a calculation of ground water velocity and graphical presentation ground water flow direction under/around the Landfill, based upon water level elevations taken during the Monitoring Period.

   c. For each monitoring well addressed by the report a description of: 1) the method and time of water level measurement, 2) the method of purging, purge rate, and well recovery time, 3) field parameter readings, and 4) the method of disposing of the purge water.

   d. For each Monitoring Point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, travel blanks, and duplicate samples taken; the date and time of sampling; the name and qualifications of the person actually taking the samples; description of any anomalies).

   e. Discussion of the Post-Sampling Purge as required by Chapter 15 [section 2550.7(e)(12)(B) of Article 5].

3. **Map** - A map or aerial photograph showing monitoring locations, relative physical features, and ground water contours to the greatest degree of accuracy possible.

4. **Laboratory Results** - Laboratory results and statements demonstrating compliance with **Part II** and results of all sampling and analyses performed at the Landfill outside these requirements shall be summarized and reported.

5. **Standard Observations** - A summary of Standard Observations (**Part V.J.**) made during the Monitoring Period shall be noted.

B. **ANNUAL SUMMARY REPORT - By July 31 of each year**, the Discharger shall submit an annual report to the Board covering the previous monitoring year. The annual Monitoring Period ends December 31. This report may be combined with the semi-annual Monitoring Report and must meet the general requirements outlined in **Part IV.A.** above in addition to the following:

1. **Graphical Presentation of Analytical Data** - For each Monitoring Point in each medium, submit in graphical format the laboratory analytical data. Graphs shall effectively illustrate trends and/or variations in the analytical data. Each graph shall plot a single constituent concentration over time at one or more monitoring points in a single medium. Maximum contaminant levels (MCL's) and/or concentration limits shall be graphed along with constituent concentrations where applicable. Graphs shall plot each datum, rather than plotting mean values.

2. **Analytical Data** - Monitoring analytical data obtained during the previous year, presented in tabular form as well as on 3.5" diskettes, in Excel™ format (or in another file format acceptable to the Executive Officer). Additionally complete data histories of each well shall be submitted in hard copy form or on diskette.

3. **Discussion** - A comprehensive discussion of the compliance record. A summary of significant monitoring or operational changes made during the year. A review of analytic results for the year shall also be included.

4. **Map** - A map showing the areas where filling has taken place during the previous calendar year. Indicate areas, if any, in which filling has been completed or final cover has been placed.

C. **CONTINGENCY RESPONSE**

1. **Leachate Seep** - The Discharger shall report within 24 hours by telephone concerning the discovery of previously unreported seepage from the Landfill. A written report shall be filed with the Board within seven days containing at least the following information:
   a. A map showing the location(s) of seepage;
   b. An estimate of the flow rate;
   c. A description of the nature of the discharge (e.g., pertinent observations and analyses); and
   d. A summary of corrective measures both taken and proposed.

2. **Response to an Initial Indication of a Release** - Should the initial statistical or non-statistical comparison (under **Part III. A or B**) indicate that a release is tentatively identified, the Discharger shall:
   a. Within 24 hours notify the Board verbally as to the Monitoring Point(s) and constituent(s) or parameter(s) involved;
   b. Provide written notification by certified mail within seven days of such determination; and
   c. Either of the following:
      i. Shall carry out a discrete retest in accordance with **Part III. C**, or;
      ii. Make a determination in accordance with Chapter 15, section 2550.8(k)(7), that a source other than the Landfill caused the evidence of the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in the ground water, surface water, or the unsaturated zone.

   If the retest confirms the existence of a release, the Discharger shall carry out the requirements of **Part IV C.4.** In any case, the Discharger shall inform the Board of the outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days.

3. **Physical Evidence of a Release** - If either the Discharger or the Executive Officer determines that there is significant physical evidence of a release [23 CCR section 2550.1(3)], the Discharger shall conclude that a release has been discovered and shall:

   a. Within seven days notify the Board by certified mail (or acknowledge the Board's determination);

   b. Carry out the requirements of **Part IV.C.4.** for potentially-affected monitored media; and

   c. Carry out any additional investigations stipulated in writing by the Executive Officer for the purpose of identifying the cause of the release.

4. **Release Discovery Response** - If the Discharger concludes that a release has been discovered the following steps shall be carried out:

   a. If this conclusion is not based upon monitoring for all Constituents of Concern, then the Discharger shall sample for Constituents of Concern at Monitoring Points in the affected medium. Within seven days of receiving the laboratory analytical results, the Discharger shall notify the Board by certified mail of the concentration of Constituents of Concern at each Monitoring Point. This notification shall include a synopsis showing for each Monitoring Point, those constituents that exhibit an unusually high concentration;

   b. The Discharger shall, within 90 days of discovering the release, submit a Revised Report of Waste Discharge proposing an Evaluation Monitoring and Reporting Program that:

      (1) Meets the requirements of 23 CCR '2550.8(k)(5) and 23 CCR '2550.9; and

      (2) Satisfies the requirements of 40 CFR '258.55(g)(1)(ii) by installing at least one monitoring well directly downgradient of the center of the release;

   c. The Discharger shall within 180 days of discovering the release, submit a preliminary engineering feasibility study meeting the requirements of 23 CCR '2550.8(k)(6); and

   d. The Discharger shall immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that the Discharger can meet the requirement [under 23 CCR '2550.9(b)] to submit a delineation report within 90 days of when the Board directs the Discharger to begin the Evaluation Monitoring and Reporting Program.

5. **Release Beyond Facility Boundary** - Any time the Discharger concludes (or the Executive Officer directs the Discharger to conclude) that a release from the Landfill has proceeded beyond the facility boundary, the Discharger shall so notify persons who either own or reside upon the land that directly overlies any part of the plume (Affected Persons).

   a. Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of the Discharger's current knowledge of the nature and extent of the release.

   b. Subsequent to initial notification, the Discharger shall provide updates to all Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.

   c. Each time the Discharger sends a notification to Affected Persons (under a. or b., above), the Discharger shall, within seven days of sending such notification, provide the Board with both a copy of the notification and a current mailing list of Affected Persons.

PART V: DEFINITION OF TERMS

A. AFFECTED PERSONS - All individuals who either own or reside upon the land that directly overlies any part of that portion of a gas- or liquid-phase release that has migrated beyond the facility boundary.

B. CONSTITUENTS OF CONCERN - Those constituents which are likely to be in the waste in the Landfill or which are likely to be derived from waste constituents in the event of a release. The Constituents of Concern for this Landfill are listed in Part I.E.5.

C. MATRIX EFFECT - Any increase in the Method Detection Limit or Practical Quantitation Limit for a given constituent as a result of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample being analyzed.

D. METHOD DETECTION LIMIT (MDL) - The lowest concentration at which a given laboratory using a given analytical method to detect a given constituent can regularly differentiate with 99% reliability between a sample which contains the constituent and one which does not. The MDL shall reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory.

E. MONITORED MEDIA - Those water bearing media that are monitored pursuant to this Monitoring and Reporting Program. The Monitored Media may include: 1) ground water in the uppermost aquifer, in any other portion of the zone of saturation ('2601 of Chapter 15) in which it would be reasonable to anticipate that waste constituents migrating from the Landfill could be detected, and in any perched zones underlying the Landfill, 2) any bodies of surface water that could be measurably affected by a release, and 3) soil pore liquid beneath and/or adjacent to the Landfill.

F. MONITORING PARAMETERS - A short list of constituents and parameters used for the majority of monitoring activity. The Monitoring Parameters for this Landfill are listed in Part I.E.3.

G. MONITORING PERIOD - The duration of time during which a sampling event must occur. The Monitoring Period for analysis of all Constituents of Concern is five years; the Monitoring Period for the Monitoring Parameters is semi-annual. Semi-annual monitoring will be performed within the following time frames: Winter/Spring (January 1 to June 30), Summer/Fall (July 1 to December 31). The due date for any given report will be 30 days after the end of its Monitoring Period unless otherwise stated.

H. PRACTICAL QUANTITATION LIMIT (PQL) - The lowest acceptable calibration standard (acceptable as defined for a linear response or by actual curve fitting) times the sample extract dilution factor times any additional factors to account for matrix interference. The PQL shall reflect the quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. PQLs reported by the laboratory shall not simply be restated from USEPA analytical method manuals. In relatively interference-free water, laboratory-derived PQLs are expected to closely agree with published USEPA PQLs. If the lab suspects that due to matrix or other effects the quantitation limit for a particular analytical run differs significantly from the laboratory-derived PQL, the results should be flagged accordingly along with an estimate of the quantitation limit achieved.

I. SIGNIFICANT STORM - Any storm event which results in significant storm water runoff or a significant increase in ongoing storm water runoff.

J. STANDARD OBSERVATIONS (As referenced in Part I.A. SITE INSPECTIONS)

1. **For Receiving Waters:**

   a. Floating and suspended materials of waste origin-presence or absence, source, and size of affected area;

   b. Discoloration and turbidity-description of color, source, and size of affected area;

   c. Evidence of odors-presence or absence, characterization, source, and distance of travel from source;

   d. Evidence of beneficial use-presence of water-associated wildlife; and

   e. Flow rate to the receiving water.

2. **Along the perimeter of the Landfill:**

   a. Evidence of liquid leaving or entering the Landfill, estimated size of affected area, and flow rate (show affected area on map);

   b. Evidence of odors; presence or absence, characterization, source, and distance of travel from source;

   c. Evidence of erosion and/or of exposed refuse; and

   d. Inspection of all storm water discharge locations for evidence of non-storm water discharges during dry seasons, and integrity during wet seasons.

3. **For the Landfill:**

   a. Evidence of ponded water at any point on the waste management facility (show affected area on map);

   b. Evidence of odors; presence or absence, characterization, source, and distance of travel from source;

   c. Evidence of erosion and/or of daylighted refuse;

   d. Compliance with Storm Water Pollution Prevention Plan, insuring that the terms of the general permit are properly implemented; and

   e. Integrity of all drainage systems

K. RECEIVING WATERS - Any surface water which actually or potentially receives surface or ground waters which pass over, through, or under waste materials or contaminated soils.

L. VOLATILE ORGANICS COMPOSITE MONITORING PARAMETER (VOC $_{composite}$) - The VOC $_{composite\ parameter}$ is a composite parameter that encompasses a variety of VOCs. The constituents addressed by the VOC $_{composite}$ Monitoring Parameter include all VOCs detectable using USEPA Method 8260, including at least all 47 VOCs listed in Appendix I to 40 CFR 258 and unidentified peaks (reference unidentified peaks in Part II.A.6.).

ORDERED BY _____
Executive Officer

7-23-97
Date